REMARKS

Claims 1-37 are pending in this application. Claims 1-17 and 34-37 have been canceled previously, leaving claims 18-33 remaining. Claims 29 and 30 have been amended in the expectation that the amendments will place this application in condition for allowance. Further, the Specification has been amended to correct an informality in the Brief Description of Figures 4 and 5, which was noted during the prosecution of a related application.

The amendments do not introduce new matter within the meaning of 35 U.S.C. §132. Basis for the claim amendments is found on page 6, lines 7-21; page 9, lines 9 to page 10, line 10; in claims 1-37 as originally filed; and elsewhere throughout the specification and claims. Accordingly, entry of the amendments is respectfully requested.

Applicants take this opportunity to thank the Examiner for the indication of allowable subject matter of Claims 18-28, upon resolution of the obviousness-type double patenting rejection.

1. Rejection of Claims 30-33 under 35 U.S.C. §102(b)

The Office Action rejects claims 30-33 under 35 U.S.C. 102(b) as being anticipated by Vielfaure (French 2656215). As the basis for this rejection, the Office Action states:

> Vielfaure shows an image acquisition element 2, 7 and display 3. The showing of these elements inherently implies a grabber which functions to capture and transmit the image. All of the claimed structure being shown, the

> intended use with an orthodontic element and a surface in given no patentable weight. Vielfaure shows providing guidance with display markings 121' which inherently implies a module that functions to provide guidance.

Applicants respectfully traverse this rejection on the basis that the Vielfaure patent fails to teach the claimed subject matter. Applicants' claims 30-33 as presently amended are directed to a system for positioning of an orthodontic element or a marking device having a marking member for marking a position for subsequent placement of an orthodontic element on a surface, comprising the following elements: a device for steering an orthodontic element while positioning said element onto said surface or for marking said position on said surface by means of a marking member; an image acquisition unit for capturing an image of the surface or of said element, and an image of both once the surface and said element are proximal to one another, said image acquisition unit being mounted on said device such that said element or said marking member is in the field of view of said unit; an image grabber coupled to said image acquisition unit for receiving the image captured by the image acquisition unit and transmitting an image or a representation thereof to a display unit; and a display unit, coupled to the image grabber, for displaying said image or representation.

By contrast, Vielfaure does not disclose nor suggest the above combination of features. At page 10, lines 29-34, and referring to Fig. 3, of the reference, Vielfaure suggests that the projector 7

of Fig. 2 may be ***replaced*** with the arm 8 of Fig. 2. However, there is no suggestion that the arm and the camera 2 should be ***combined*** such that the bracket 13 is in the field of view of the camera 2.

To constitute anticipation under 35 U.S.C. §102, all material elements of a claim must be found in one prior art source. In re Marshall, 577 F.2d 301, 198 USPQ 344 (CCPA 1978); In re Kalm, 378 F.2d 959, 154 USPQ 10 (CCPA 1967). The Vielfaure patent's disclosure of one alternative embodiment with projector 7 and another alternative embodiment with arm 8 is not tantamount to a disclosure of a combination thereof. Thus, in the absence of any teaching in the Vielfaure patent that the arm and the camera 2 should be combined such that the bracket 13 is in the field of view of the camera 2, the Vielfaure patent does not anticipate the present claims.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

2. Rejection of Claim 29 under 35 U.S.C. §103(a)

The Office Action rejects claim 29 under 35 U.S.C. 103(a) as being unpatentable over Diamond (4850864) (hereinafter "the '864 patent"). As the basis for this rejection, the Office Action states:

> Diamond shows a method of using a processor in the form of a computer, Figs. 16 and 17, to determine the proper position of an orthodontic element that includes displaying an orthodontic element, column 11, lines 46-

> 50. Capturing images with an image acquisition unit is well known an would have been obvious to one of ordinary skill in the art. The image, such as shown in Fig. 19 of Diamond that include a string of teeth, as taught by the citation above, together with the wire as taught comprises guidance information.

Applicants respectfully traverse this rejection. To establish a prima facie case, the PTO must satisfy three requirements. First, the prior art reference must teach or suggest all the limitations of the claims. In re Wilson, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). Second, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference. In re Fine, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Third, the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. Amgen, Inc. v. Chugai Pharm. Co., 927 F.2d 1200, 1209, 18 U.S.P.Q.2d 1016, 1023 (Fed. Cir. 1991).

Applicants respectfully traverse this rejection on the basis that the '864 patent fails to teach the claimed subject matter. Applicants' claim 29 as presently amended is directed to a method for orthodontic treatment, comprising the steps of: determining a proper position of an orthodontic element on a surface; capturing an image of the element through an image acquisition unit; and displaying an image or representation of the element on a display

together with guidance information on proper position of the element on the surface and positioning said element on the surface with the aid of said guidance information, wherein said guidance information is corrected as the position of the element changes with respect to said surface.

By contrast, the '864 patent discloses a dental apparatus for measuring the height and width of a dental surface and for placement of a bracket at an exact position with respect to the dental surface, having a first pair of opposing jaws which are movable for measuring the long axis of the tooth; a second pair of opposing jaws for measuring the mesio-distal width of the tooth; a pair of arms which are confrontingly biased and can be spread apart to grasp opposing sides of the bracket for retaining the bracket prior to placement and for subsequent release of the bracket after placement; a servo mechanism for automatic control of the placement of the bracket at a calculated position; and a computer which can provide an image of the tooth whereby the bracket placement can be predicted on the computer and then through the servo mechanism the instrument can be instructed for proper bracket placement.

Thus, in the claimed inventive subject matter, as the element is continuously brought into proximity to the surface, the image acquisition unit is correspondingly continuously monitoring the element, capturing images thereof on a continual basis as well. Each time an image is acquired, the corresponding guidance

information is displayed, and thus the guidance information is effectively "corrected" continuously until the element is at a position matching the proper position thereof.

The '864 patent, on the other hand, discloses a completely different type of system and method to the claimed inventive subject matter. In the '864 patent, "guidance information" regarding the proper positioning of the bracket is input directly to the device of the reference, for controlling the servo motors that then fix the position of the bracket relative to the device (see col. 11, lines 21 to 30 and lines 42 to 45). Thus, the device can act as a jig for placing the bracket on a tooth surface. However, there is no feedback of guidance information as the relative position between the bracket and the tooth changes as the bracket is brought into proximity to the tooth.

Thus, in the absence of any teaching or suggestion in the '864 patent that the guidance information is corrected as the position of the element changes with respect to said surface, the claims of the present application cannot be obvious over the '864 patent.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw this rejection.

3. Rejection of Claims 18-28 and 30-33 under the Judicially Created Doctrine of Obviousness-type Double Patenting

The Office Action rejects claims 18-28 and 30-33 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6,334,772. As the basis for this rejection, the Office Action states:

> Although the conflicting claims are not identical, they are not patentably distinct from each other because to not include the steps of positioning and fixing the element on the tooth is an obvious matter of choice in not using all steps to one of ordinary skill in the art. To call the indicator a target sign is an obvious matter of choice in terminology to the skilled artisan. The system claimed is obvious in view of the method steps of the patent.
>
> Claims 18-28 and 30-33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6,334,772. Although the conflicting claims are not identical, they are not patentably distinct from each other because to not include the steps of positioning and fixing the element on the tooth is an obvious matter of choice in not using all steps to one of ordinary skill in the art. To call the indicator a target sign is an obvious matter of choice in terminology to the skilled artisan. The system claimed is obvious in view of the method steps of the patent.
>
> Claim 29 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6,334,772 in view of Diamond (4850864). The claims of the 772 patent show the method, however, does not show the processor. Diamond shows using a processor 352 in determining bracket placement, column 11, lines 11-20. It would be obvious to one of ordinary skill in the art to modify the claims of the 772' patent to include the use of a processor as shown by Diamond in order to better position the
> bracket.

> Claims 18-33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,695,613. Although the conflicting claims are not identical, they are not patentably distinct from each other because to not include the steps of positioning and fixing the element on the tooth is an obvious matter of choice in not using all steps to one of ordinary skill in the art. To call the indicator a target sign is an obvious matter of choice in terminology to the skilled artisan. The system claimed is obvious in view of the method steps of the patent.

In order to advance prosecution, Applicants, through their attorneys of record herein, have executed and file herewith a Terminal Disclaimer over U.S. Patent No. 6,334,772. Applicants respectfully submit that the filing of the Terminal Disclaimer obviates the grounds for the obviousness-type double patenting rejection.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

CONCLUSION

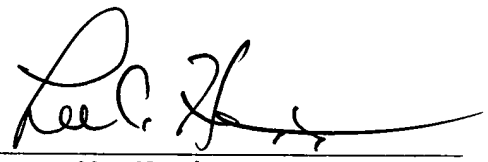
Based upon the above remarks, the presently claimed subject matter is believed to be novel and patentably distinguishable over the prior art of record. Further, the term of the patent to issue for the presently claimed subject matter has been disclaimed to the extent of the term of U.S. Patent No. 6,334,772. The Examiner is therefore respectfully requested to reconsider and withdraw the rejections of remaining claims 18-33 and allow all pending claims presented herein for reconsideration. Favorable action with an

early allowance of the claims pending in this application is earnestly solicited.

The Examiner is welcomed to telephone the undersigned attorney if he has any questions or comments.

Respectfully submitted,

NATH & ASSOCIATES PLLC

Date: January 10, 2005 By: 

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